

What is claimed is:

- sub C4) 1. A tower crane device comprising:
a basket supporting a tower crane; and
a plurality of support stubs with each support stub attached to a respective vertical
column of a structure, wherein the basket rests on the support stubs.
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2. The tower crane device according to claim 1, further comprising a plurality of outriggers
attached to the basket and spaced apart from each other with each outrigger being supported by
the respective support stub.
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- sub A16) 3. The tower crane device according to claim 2, further comprising at least three clamps
each operable to secure the basket to the respective support stub.
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- sub C4) 4. The tower crane device according to claim 1, further comprising a plurality of outriggers
attached to the basket and spaced apart from each other with each outrigger including a foot
member operable to extend over and rest on the respective support stub.
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5. The tower crane device according to claim 4, wherein each support stub comprises a first
stub member and a second stub member positioned at substantially right angle to the first stub
member. B2 (Fig 6)
- sub A17) 6. The tower crane device according to claim 5, further comprising at least three yokes each
operable to secure the respective foot member to the respective support stub, wherein the yoke
includes:
a plate positioned between the first and second stub members and under the flanges of the
first and second stub members; and
a threaded rod inserted through the foot member and the plate to secure the respective
foot member on the flanges of the support stub.
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7. The tower crane device according to claim 1, wherein the basket includes:
an upper frame;
a lower frame having a larger diameter than the upper frame; and
a plurality of arms coupling the upper frame to the lower frame with each arm extending
toward a respective support stub.
8. The tower crane device according to claim 1, wherein the basket is a first basket, further
comprising:
a second basket slidably coupled to a tower; and
a plurality of support stubs with each support stub attached to a respective vertical
column of the structure and supporting the second basket.
9. The tower crane device according to claim 8, further comprising:
a climbing frame slidably coupled to the tower; and
a lifter attached to the second basket and the climbing frame, the lifter operable to:
raise the climbing frame with respect to the tower while the second basket is in a
stationary position; and
raise the second basket with respect to the tower while the climbing frame is in a
stationary position.
10. The tower crane device according to claim 9 wherein after the second basket is raised the
lifter is further operable to raise the first basket using the climbing frame while the second basket
is in a stationary position.
11. The tower crane device according to claim 8, further comprising:
a climbing frame slidably coupled to the tower;
a frame locker having an unlocked position and a locked position that locks the climbing
frame to the tower;

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a basket locker having an unlocked position and a locked position that locks the second basket to the tower;

a lifter attached to the second basket and the climbing frame, the lifter operable to:

5 raise the climbing frame with respect to the tower while the frame locker is in the unlocked position and the basket locker is in the locked position; and

raise the second basket with respect to the tower while the frame locker is in the locked position and the basket locker is in the unlocked position.

10 12. The tower crane device according to claim 11 wherein after the second basket is raised the lifter is further operable to raise the first basket with respect to the tower while the frame locker is in the locked position and the basket locker is in the unlocked position.

15 13. The tower crane device according to claim 12 wherein the frame locker comprises a first dog attached to one side of the climbing frame and a second dog attached to another side of the climbing frame.

20 14. The tower crane device according to claim 12 wherein:
the frame locker includes a first dog attached to one side of the climbing frame and a second dog attached to another side of the climbing frame; and
the basket locker includes two dogs attached to different sides of the second basket.

25 15. A tower crane device comprising:
a first basket operable to support a tower crane;
a plurality of first outriggers attached to the first basket and spaced apart from each other, each first outrigger having a foot; and
a plurality of first support stubs with each first support stub mounted to a respective vertical column of a structure, wherein each first outrigger foot rests on a respective first support stub.

16. The tower crane device according to claim 15, wherein the first basket includes:
an upper frame;
a lower frame having a larger diameter than the upper frame; and
a plurality of arms coupling the upper frame to the lower frame with each arm extending
toward a respective support stub.
17. The tower crane device according to claim 16, further comprising:
a second basket slidably coupled to the tower crane and spaced apart from the first
basket; and
a plurality of second outriggers attached to the second basket and spaced apart from each
other, each second outrigger having a foot; and
a plurality of second support stubs with each second support stub mounted to a respective
vertical column of the structure, each second outrigger foot resting on a respective second
support stub.
18. The tower crane device according to claim 17, further comprising:
a climbing frame slidably coupled to the tower crane;
a lifter attached to the second basket and the climbing frame, the lifter operable to:
raise the climbing frame with respect to the tower while the second basket is in a
stationary position; and
raise the second basket with respect to the tower while the climbing frame is in
the stationary position.
19. A tower crane device comprising:
a first basket supporting a tower crane;
a plurality of first outriggers attached to corners of the first basket and spaced apart from
each other, each first outrigger having a foot; and

a plurality of first support stubs with each first support stub mounted to a respective vertical column of a structure, wherein each foot rests on and is in compression with a respective first support stub.

5 20. A tower crane device comprising:
a lower basket operable to support a tower crane; and
a plurality of lower support stubs with each lower support stub mounted to a respective vertical column of a structure, the lower support stubs supporting the lower basket to distribute the weight of the tower crane on the vertical columns of the structure;
10 an upper basket slidably coupled to the tower crane; and
a plurality of upper support stubs with each upper support stub mounted to a respective vertical column of the structure, the upper support stubs supporting the second basket.

15 21. A tower crane device for a concrete structure, comprising:
a basket operable to support a tower crane;
a plurality of outriggers attached to the basket and spaced apart from each other, each outrigger having a foot;
a plurality of support holes disposed on columns of the concrete structure with each support hole receiving a respective outrigger foot.

20 22. A method of lifting a tower crane extending through an opening in structure of a building under construction, comprising:
resting a first basket supporting a tower on vertical columns of a structure;
resting a second basket on the vertical columns of the structure, the second basket being
25 slidable with respect to the tower;
providing a climbing frame slidably coupled to the tower;
raising the climbing frame with respect to the tower while the second basket is in a stationary position; and

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24. The method according to claim 22, further comprising raising the first basket using the climbing frame while the second basket is in a stationary position.

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